



PATENT ABSTRACTS OF JAPAN

(11) Publication number: **61230110 A**(43) Date of publication of application: **14.10.1986**(51) Int. Cl. **G02B 7/11**

G01C 15/00, G02B 17/00, G03B 3/00

// G01C 3/00

(21) Application number: **60071619**(22) Date of filing: **04.04.1985**(71) Applicant: **SEIKO KOKI KK**(72) Inventor: **ISHIDA HIROAKI
NAGAOKA SHINJI****(54) PROJECTOR FOR PROJECTION TYPE
DISTANCE MEASURING INSTRUMENT****(57) Abstract:**

PURPOSE: To project light with a small beam diameter by providing a projection opening to a spherical container which has a light reflecting surface as its internal surface and putting a light emitting element in the container.

CONSTITUTION: The spherical container 2 whose internal surface 2a is finished specularly is provided with the light emitting diode 3 having a light emission surface inside and the projection opening 4 in a shape corresponding to the sectional shape of the light beam. When the diode 3 of the projector 1 is powered on to illuminate, light from the diode 3 is all reflected by the

internal surface 2a and converged on the projection opening 4. Therefore, light having the light output of the diode is projected as a thin beam. Further, the light output can be increased by increasing the number of light emitting element put in the container.

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